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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,276	06/05/2001	Ryoichi Kawada	010715	6026

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EXAMINER

PARSONS, CHARLES E

ART UNIT PAPER NUMBER

2613

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/873,276

Applicant(s)

KAWADA ET AL.

Examiner

Charles E Parsons

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2, 4 and 5 is/are allowed.
- 6) ☒ Claim(s) 1, 3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Response to Arguments***

1. Applicant's arguments filed 11/23/2004 have been fully considered but they are not persuasive. The Applicant argues that Shimizu does not teach averaging the motion vectors and comparing the average of the motion vectors to the direction of a motion vector. The Examiner disagrees. Figure 15 clearly shows that he is comparing the average direction with a critical direction. Furthermore, he teaches in column 17 lines 60-64 that the critical direction could be any direction.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu in view of Huang.

Claim 1: A detection apparatus for road obstructions for automatically monitoring obstructions on a road by using a remote monitoring camera, comprising:  
a motion vector direction detector for detecting the direction of the motion vector; ( see Shimizu column 14 lines 45-55, as well as lines 61-64. note that Shimizu detects the direction of the vector.)  
and comparison means for motion vector with the pre-detected motion state, (See column 14 lines 61-64 wherein Shimizu teaches that he compares the direction of the vectors to the average direction.

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and wherein, when it is determined by the comparison means that the direction of the motion vector is offset from the comparing the direction of the average of the directions vectors in the road area in a normal average of the motion vectors in the road area in the normal state by not less than a predetermined value, road obstructions are decided.

(While Shimizu teaches that he sets the alarm when the direction of the vector in the critical area is in approximately the same direction, He further teaches in column 17 lines 60-64 that the critical direction can be set arbitrarily by the user as any direction thus it could be in a different direction from that of the flow of traffic.).

a motion vector calculator for calculating a motion vector of a video image in a road area; (While Shimizu is not monitoring a road Huang is, se figure 4A. Huang also extracts motion vector information implying the presence of a motion vector detector, see figure 6. Therefore it would have been obvious to one of ordinary skill in the art, to use Shimizu's invention in a road environment to detect anomalies such as obstructions, motivated by the Huangs teaching in column 1 lines 37-46 that video cameras are well suited for monitoring roads.)

Claim 3: A detection apparatus for road obstructions according to claim 1, wherein the motion vector calculator calculates motion vectors of respective blocks of a video image in a road area, and the motion vector direction detector detects the directions of the motion vectors of the respective blocks. (See Shimizu column 14 lines 45-53.)

### ***Allowable Subject Matter***

3. Claims 2,4,5 are allowed. The following is a statement of reasons for the indication of allowable subject matter: The combination of elements claimed in claim 2 was not found in a prior art search nor considered obvious by the Examiner. In particular the statistics memory as well as the abnormal motion

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vector degree calculator claimed in claim 2 were not found. The closest prior art cited did not teach the calculation of the degree of the critical vector from the average vector.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E Parsons whose telephone number is 703-305-3862. The examiner can normally be reached on M-TH 7AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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CEP

A handwritten signature in black ink, appearing to read "Chris Kelley".

CHRIS KELLEY  
SUPERVISOR, PATENT EXAMINER  
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